

# Relative Position Indicator Concept for Managing Mixed RNAV and Vectored Arrival Traffic, Phase I

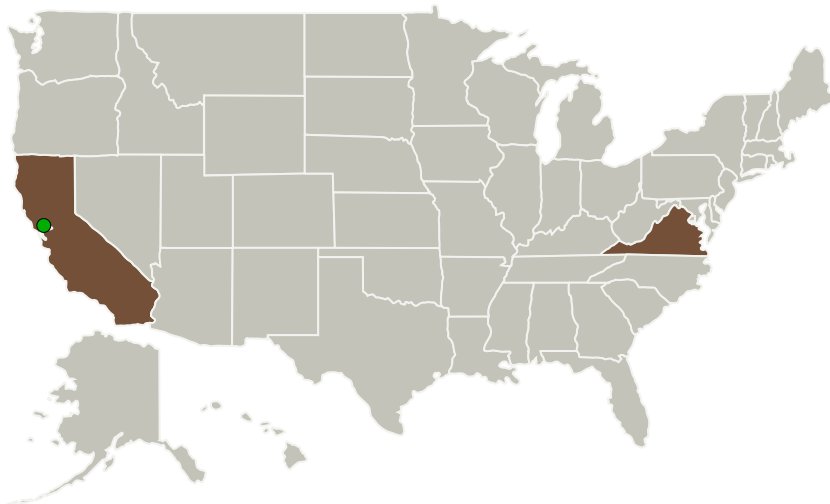
Completed Technology Project (2011 - 2011)



## Project Introduction

Mosaic ATM proposes to study a Relative Position Indicator (RPI) concept for managing mixed RNAV and traditionally vectored arrival traffic, to enable increased adoption of RNAV procedures in airspace or traffic environments that include mixed RNAV and non-RNAV aircraft. The most common reason controllers give for why RNAV procedures are not used at their airports is the difficulty handling mixed RNAV and non-RNAV flights. Our proposed concept directly addresses this complaint, providing a controller decision aid to help controllers merge RNAV and non-RNAV aircraft. We will also study other applications of the RPI concept, such as planning departure slots into an arrival stream. The project directly compliments NASA's research and contributes to the NASA Airspace Systems Program's mission. The results of this project could be applied within NASA's TAPSS project to address mixed RNAV/vectored aircraft environments. Since RPI technology has been deployed by the FAA for other applications, and the project addresses a current need, the project also endeavors to transfer the resulting technology to the FAA for operational use.

## Primary U.S. Work Locations and Key Partners



Relative Position Indicator  
Concept for Managing Mixed  
RNAV and Vectored Arrival  
Traffic, Phase I

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Organizations Performing Work	Role	Type	Location
Mosaic ATM, Inc.	Lead Organization	Industry	Leesburg, Virginia
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Virginia

## Project Transitions

▶ **February 2011:** Project Start

✓ **August 2011:** Closed out

**Closeout Summary:** Relative Position Indicator Concept for Managing Mixed RNAV and Vectored Arrival Traffic, Phase I Project Image

**Closeout Documentation:**

- Final Summary Chart Image(<https://techport.nasa.gov/file/138458>)

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Organization:**

Mosaic ATM, Inc.

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

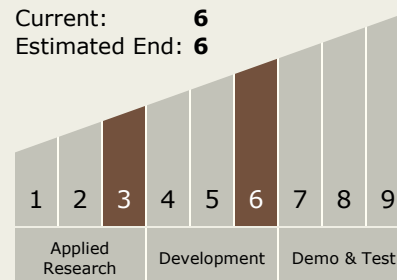
Carlos Torrez

**Principal Investigator:**

Steve Atkins

## Technology Maturity (TRL)

Start: 3  
Current: 6  
Estimated End: 6



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## Technology Areas

### Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - └ TX16.3 Traffic Management Concepts

## Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System